

APPARATUS AND METHOD FOR COMPRESSION
OF THE TIMING TRACE STREAM

Abstract of the Invention

1 In a test and debug system, a plurality of trace streams,
2 including a timing trace stream, are transmitted from the
3 target processing unit to the host processing unit for
4 analysis. The timing trace stream, the trace stream that
5 indicates activity or non-activity of the program counter
6 each clock cycle, can occupy a large percentage of the
7 bandwidth of the transmitted data. The transmitted data is
8 organized into groups of packets, each packet having a
9 control signal portion and a payload portion. Each
10 information packet has a logic signal stored at each
11 location indicating an activity or a non-activity of the
12 program counter. By identifying portion of the timing
13 trace stream wherein the activity or non-activity does not
14 change for one or more groups of timing packets, the
15 information in a plurality of packets can be represented by
16 a header and an information packet that describes a number
17 of packets in which the activity or non-activity of the
18 program counter does not change.